

50X1-HUM

## CENTRAL INTELLIGENCE AGENCY

## INFORMATION REPORT

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1. Dr. Anton Peterlin, professor of physics at the University of Ljubljana and head of the Nuclear Science Institute at Ljubljana, hopes to complete a 2 million volt Van der Graaf machine at the Institute by late 1953 or early 1954. All the work of designing has been completed at the Institute and the following essential parts for the apparatus have been purchased abroad:

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- a. Belt,
- b. Pumps,
- c. Porcelain insulators
- d. Transformer,

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2. Peterlin plans to build a high flux neutron generator (D on D, 100 kilovolts, current 1 - 5 million amperes) to continue neutron measurements. He is aware of the various types of photo-multiplier tube and scintillators, but appears to be very ignorant of their relative merits and defects, or of the experimental techniques involved in their employment.
3. Recently work has been conducted at the Institute on the use of a RA-Be neutron source to irradiate silver, et cetera, and students are being trained to measure decay of known periods in order to become familiar with counting techniques.
4. The Institute appears to be still going through the laborious stage of setting up a nuclear physics laboratory. There is very little "know how" regarding its establishment, very little apparatus, considerable drive

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and keenness, but too much State support. Interest is concentrated definitely on fundamental problems; there is no indication of any interest in possible industrial application, or application in the military field. 50X1-HUM

5. Peterlin is purportedly disconcerted by the apparently needless difficulties placed in his way by the Yugoslav authorities, whenever he attempts to purchase scientific apparatus [redacted]. One of his chief complaints is that they are precluded from purchasing photo-multipliers, "just as if Yugoslavia were a Satellite nation". To date, they have succeeded in obtaining one complete set of such equipment, which is kept for calibrations. Students wishing to use such equipment for experimental purposes must construct their own models from the stated set. Peterlin is anxious to send a member of his staff, probably one of senior lecture status, [redacted] to acquire a working knowledge of scintillation counters. 50X1-HUM
6. Peterlin would like to have more time to devote to work on rheology and experiments involving the properties of macro-molecules; however, as the head of the Nuclear Science Institute at Ljubljana, he has to devote most of his time to nuclear physics, particularly in view of the Yugoslav Government drive for more work in this field. Although he has expressed doubts relative to the wisdom of this policy, he does regard physics as a valuable discipline for the training of scientists. 50X1-HUM
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